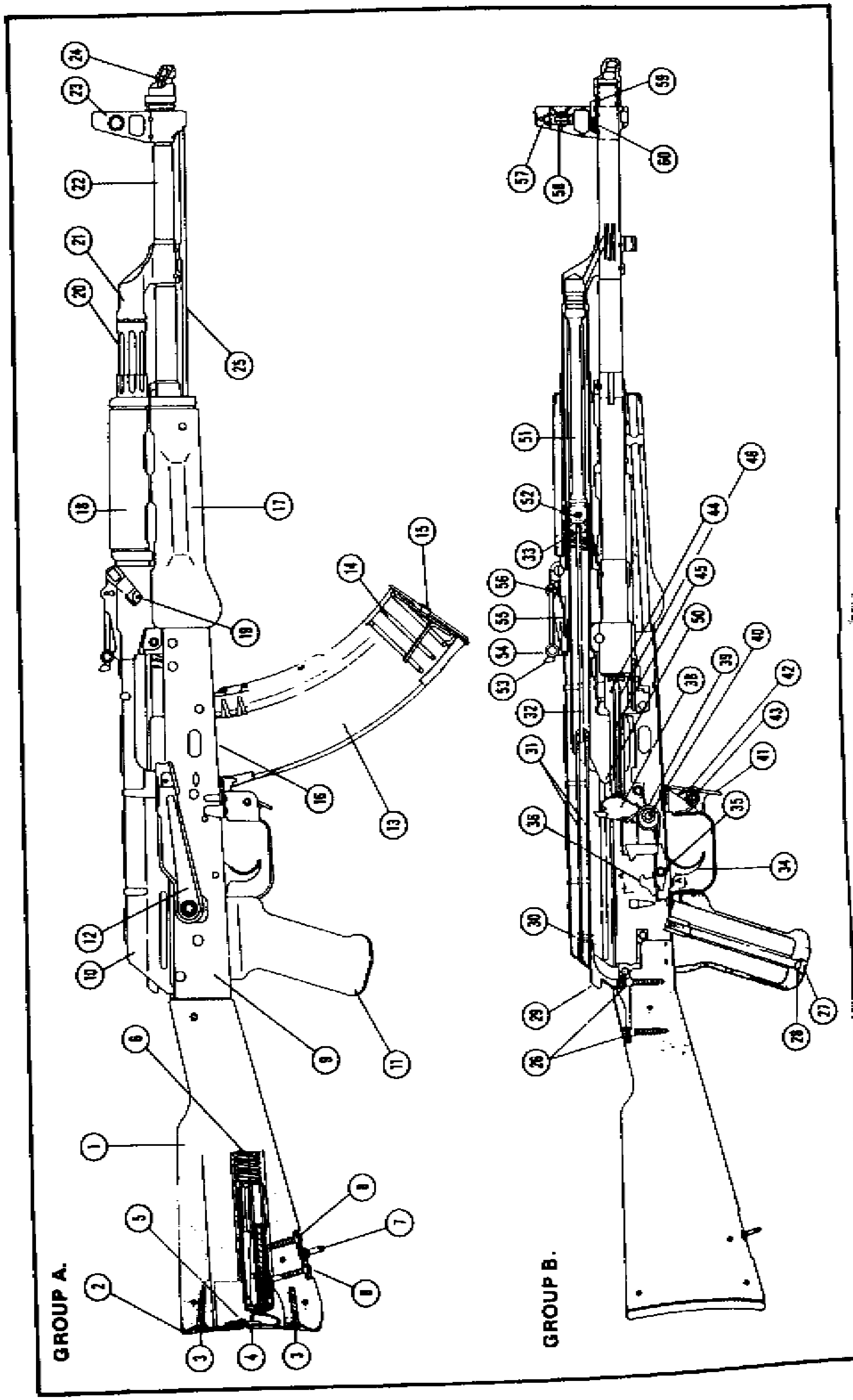
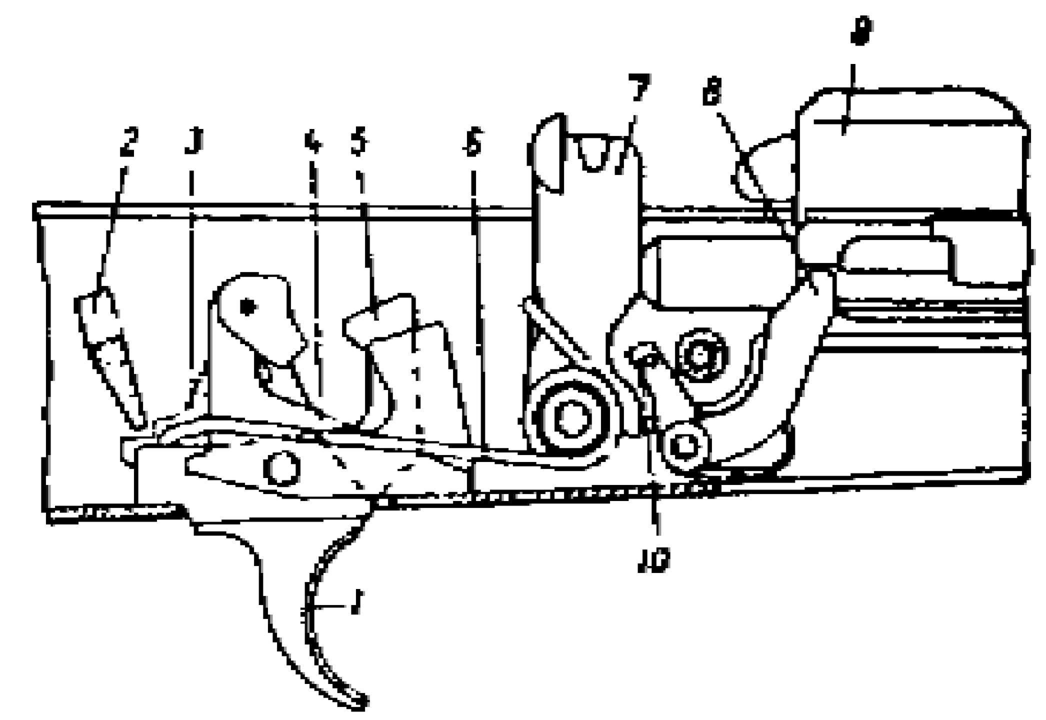
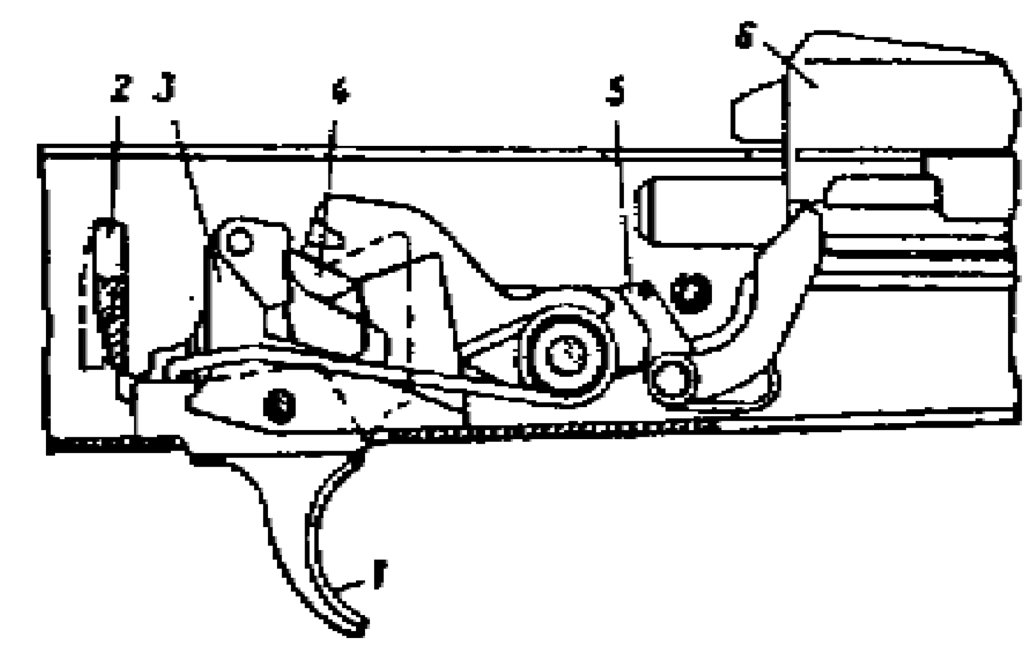
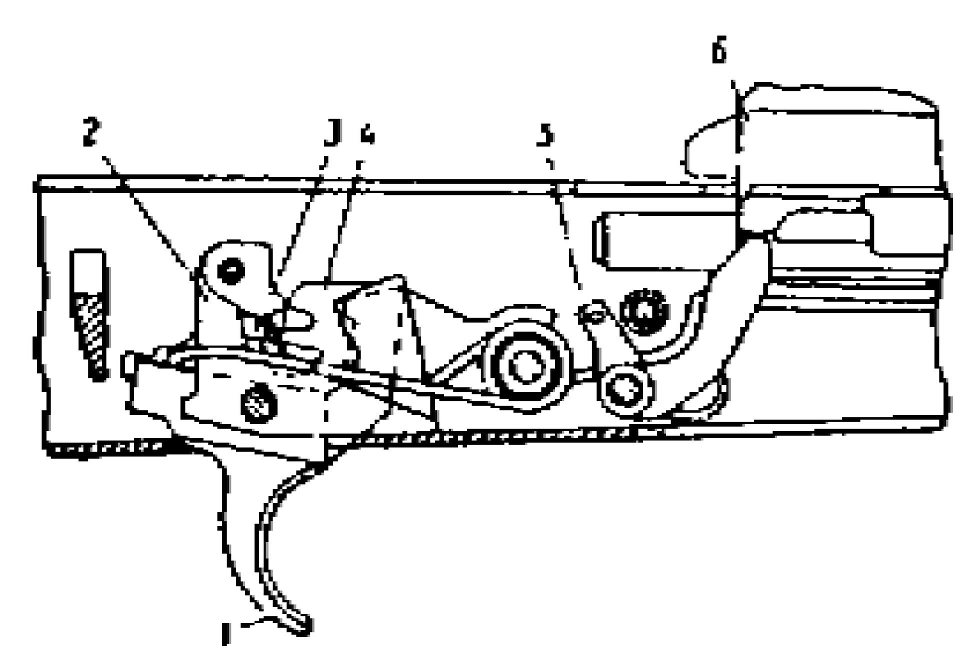


FULL AUTO CONVERSION of THE AK-47

(INCLUDES VALMET & GALIL RIFLES)







NOTICE

Published for the exclusive use of Governmental Agencies & Class 2 manufacturers.

This booklet is written for the use of governmental agencies as an instruction book for the self manufacture (under BATF license) of AK-47, AKS, Valmet and Galil rifles into select fire (full auto) rifles. The purpose is to allow agencies with limited budgets to secure advanced fire power on a budget that does not allow the purchase of higher priced, manufactured, select fire rifles. The principals illustrated here are of equal use to the licensed class two machine gun manufacturer. The first and second amendments to the United States Constitution allow the dissemination and use of this knowledge.

A BRIEF HISTORY OF THE AK-47

The AK-47 was preceded by the Russian SKS Carbine (using the new Russian 7.62 x 39 m/m M-43 cartridge). The SKS was placed in service after World War II. The Russian AK-47 was designed by Kalashnikov and used the same M-43, 7.62 x 39 m/m intermediate range cartridge as the SKS. The design is in no other way similar to that of the SKS.

The first AK-47's used cast barrel extensions riveted into stamped steel receivers. This design proved inadequate as the rivets would shoot lose and the barrel extension would separate from the receiver walls. The Russians then went to forged-machined and broached steel receivers for a number of years. This made for a very expensive short rifle. As Russian metal technology improved, the Russians were able to go back to the original Kalashnikov principal of an inexpen-

sive rifle using stampings. This improvement of the original concept was called the AKM or the "modified" AK rifle. The Russians have exported this technology and "turn Key" - plants and equipment to virtually all communist block countries and many Marxist leaning countries. Many of these countries have produced their own variations of the AK-47 and the AKM. Many of these designs are very characteristic of their country of production. In this booklet we shall deal with the semi-automatic versions of these AK's and AKM's and the accessories and parts available for their manufacture into select fire rifles as originally issued throughout the world.

We will also detail some of the more exotic accessories that are available to improve their performance and looks. It is worth noting that the Russians in 1974 introduced a new version of the AK firing a 5.45 x

39 m/m high velocity cartridge to replace the 7.62 x 39 m/m M-43 cartridge. This rifle first come to the attention of the Western world during their war in Afghanistan. The new rifle is known as the AK-74 and there are other variations of it for specialized uses such as tank-crew use.

OVERVIEW OF CONVERSION TO SELECT FIRE

To legally manufacture a semi-automatic AK-47 or AKM, a minimum of two (2) and sometimes three (3) things must be done in the following order:

1. Secure a proper license to manufacture a machine gun from the Bureau of Alcohol, Tobacco and Firearms in Washington, D.C. (This is necessary for governmental agencies as well as manufactures);
2. Secure a AK-47 full auto parts

set and make the receiver modifications required and install the parts;

and in some but not all cases (as will be explained further on:

3. Install a full auto bolt carrier in those models of rifles which do not have one.

There are special metal templates which are designed to aid you in step #2. Also there are easily done welding/machining operations which will allow you not to have to purchase a new bolt carrier as outlined in step #3.

MANUFACTURE: STEP #1

Current laws provide that a machine gun may only be manufactured/sold to the following groups:

1. For sale to government entities. (Police, Sheriff or any branch of

Government)

2. For sale as a "dealer sample" to a "Class III dealer". A "Class III dealer" is a person licensed by the BATF (Bureau of Alcohol, Tobacco and Firearms; often called Bureau of Arbitrary Technical Findings)

3. For export out of the U.S.A. with the approval of the BATF and with proper state department approval.

At this writing there are on-going court cases to restore to U.S. citizens the right to make and own a select fire or full-automatic weapon. Hopefully the court system will restore this right to U.S. citizens as guaranteed by the Second Amendment to the U.S. Constitution. Since May 19, 1986, it has been illegal to make/manufacture an automatic firearm except for one or more of the above three purposes. Therefore, be advised that should you manufacture or make an automatic

firearm without proper license and approval you are committing a felony and are subject to fine and imprisonment. This is equally true for governmental agencies and their agents.

I advise that you do not break the law!

The following facts should aid you in determining if you might be breaking the law:

1. The possession of an AK-47, AKS, etc. with the exception of some local laws is not <u>yet</u> a violation of law;

2. The possession of AK-47 full-automatic replacement parts is not a violation of law;

3. The possession of this book is not <u>yet</u> a violation of law;

4. The possession of a full-auto template is not a violation of law;

5. Thinking and planning to violate the law and possessing two or more of numbers 1 through 4 of the above <u>may be</u> a violation of law. <u>Do not break the law</u>! You may contact the BATF to determine which combination may be legal; although, others have inquired and failed to secure guidelines.

MANUFACTURE: STEP #2

Since, at the present time, full-auto replacement parts are exempt from the law; it is possible to purchase for private possession or re-sale full-auto replacement parts for your AK or similar gun.

This is a good place to define "similar gun". There are several AK similar guns. These are made in the following calibres: 7.62 x 39, 5.56 x 45 (.223 Remington), 7.62 x 51 m/m Nato (.308 Winchester), and 7.9 x 57 m/m (8 m/m Mauser).

All of the following AK-47 type guns may be manufactured into select fire weapons with the one exception which is noted: (By "select

fire", I mean a rifle or pistol which has the capability of firing semi-automatically [1 shot per trigger pull] or fully automatic [shoots as long as the trigger is held and ammunition supply is not depleted])

All RPK type rifles in any calibre;

All Valmet rifles in any calibre;

All MAADI rifles in 7.62x 39 m/m;

All Hungarian rifles in 7.62 x 39 m/m;

All Yugoslave rifles in any calibre;

All Galil rifles except in calibre 7.62 x 51 m/m (.308 Winchester);

All South African 5.56 x 45 m/m, models LM-4 and LM-5.

The first step is to secure the proper license from the BATF

The next step, after securing your license, is to secure a parts set and to prepare your rifle to accept the parts. This consists of two steps:

1. Drill the receiver.
2. Slot right bolt guide rail.

Drilling the receiver:

See Fig. #1. This gives the location of the automatio sear holes. Figure #1 is correct but I suggest that you purchase a metal template and drill and spotter set.

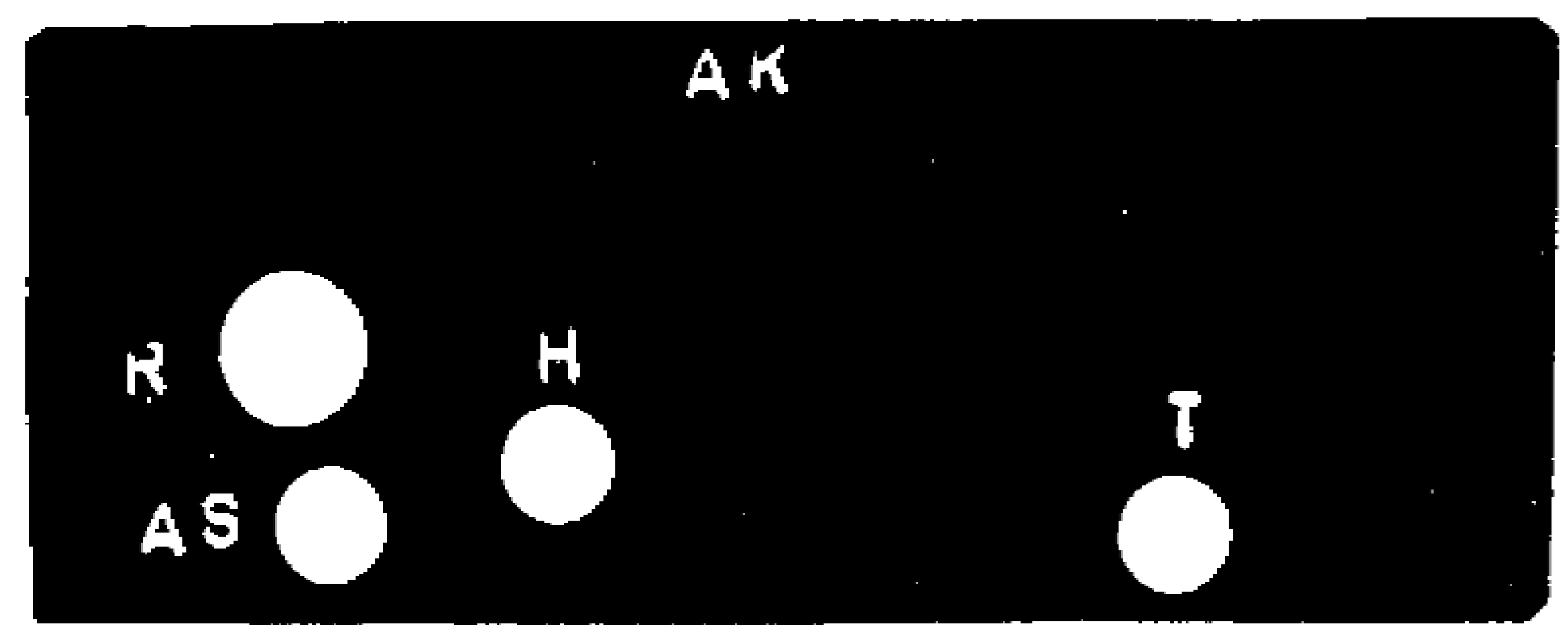


Fig. #1 Sample of an AK-47 template.

In Fig. #1, the letters signify the axis pin holes for each of the following axis pins:
T - trigger axis pin hole
H - hammer axis pin hole
R - hole to span the reinforcing rivet in guns which have this rivet. It allows the template to lay flat on the receiver. AS - Automatic sear axis pin holes. This is the only pair of holes that need to be drilled.

To use the template follow the instructions below. On the left side of the receiver

you drill a 7 m/m diameter hole. On the right side of the receiver you drill a 5 m/m diameter hole.

Beware; the correct hole diameters are 7 m/m and 5 m/m. Use drills of these diameters and not a letter drill substitute. You are only going to do this once and you may as well do it right to start with. Center punch the holes so that the drill bit doesn't "walk". See Fig. #2 below for proper template instructions.

INSTRUCTIONS FOR USE OF TEMPLATE

1. Disassemble rifle parts from the receiver.

2. Secure the template on the left side of the receiver by placing the axis pins in the holes marked "H" and "T". This will secure the template solidly to the receiver. Using a scribe, mark a circle in the hole marked "AS". After doing this remove the template and the slave pins and place the template on the opposite side of the receiver. Scribe

the "AS" hole as before and center-punch it.

3. Drill the left side of the receiver with the larger of the two drill bits. Drill the right side of the receiver with the smaller of the two drill bits.

This completes all of the work to be done with the template.

FIGURE NO. 2 Sample instructions for a template. Note many templates by CATCO are not accurate!

Figure #3 illustrates the parts needed in a select fire kit. The parts on the left of the axis pin are semi-auto and the axis pin and parts to the right of it are full auto parts.



Fig. #3 Semi-auto parts on left of pin and full auto on the right of pin.

The final modification in the 2nd step of manufacture is the slotting of the bolt carrier guide rail of the receiver wall. See Fig. #4

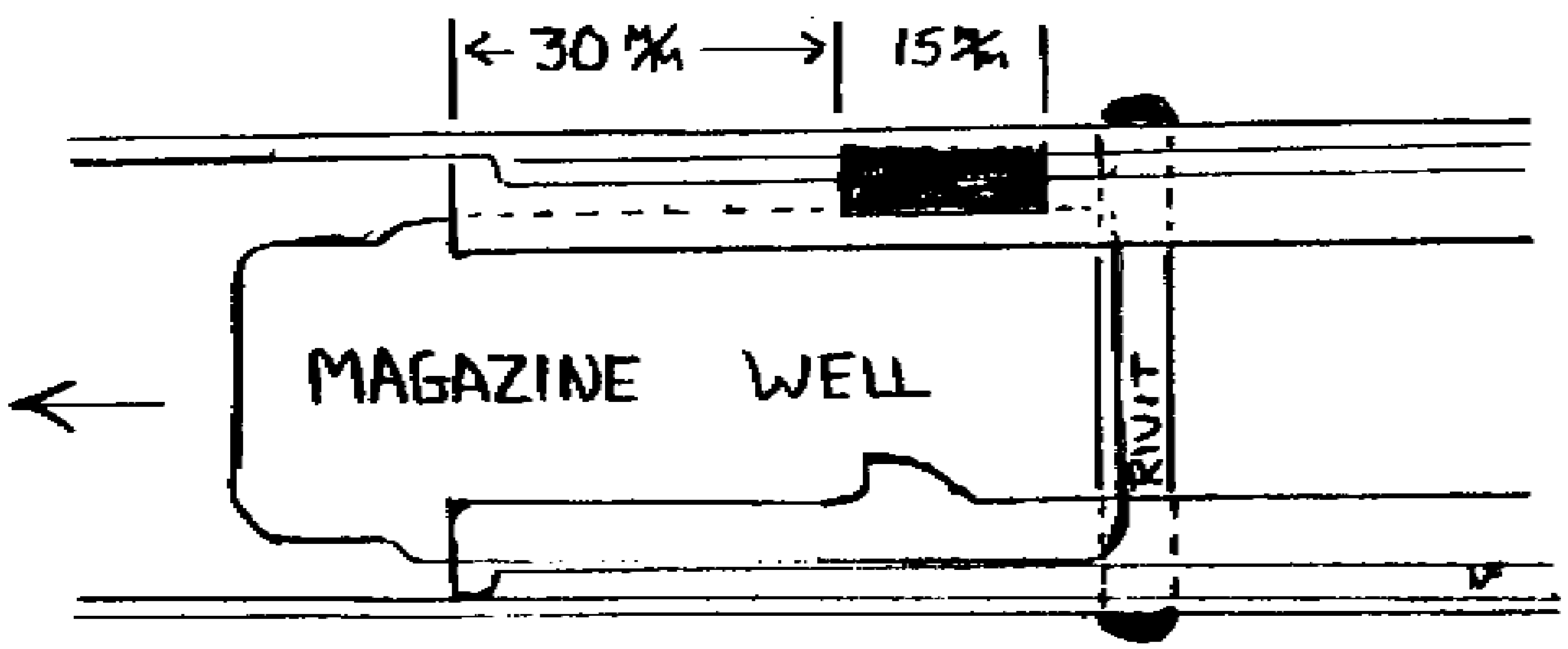


FIGURE NO. 4 Looking down into a disassembled AK. The muzzle is on the left. Dark area illustrates metal to be removed from the bolt carrier guide rail.

In this operation you slot or remove a small section of the guide rail so that the trip arm of the automatic sear will project above the rail and engage a cam on the bolt carrier which produces automatic fire when the selector lever is placed in the middle position. It is much neater to slot the rail than to cut it. This can be done by drilling a series of 1/16" holes (See Fig. #5) next to the receiver wall. Then using a Swiss file to cut out the web between them; thus producing the needed slot.

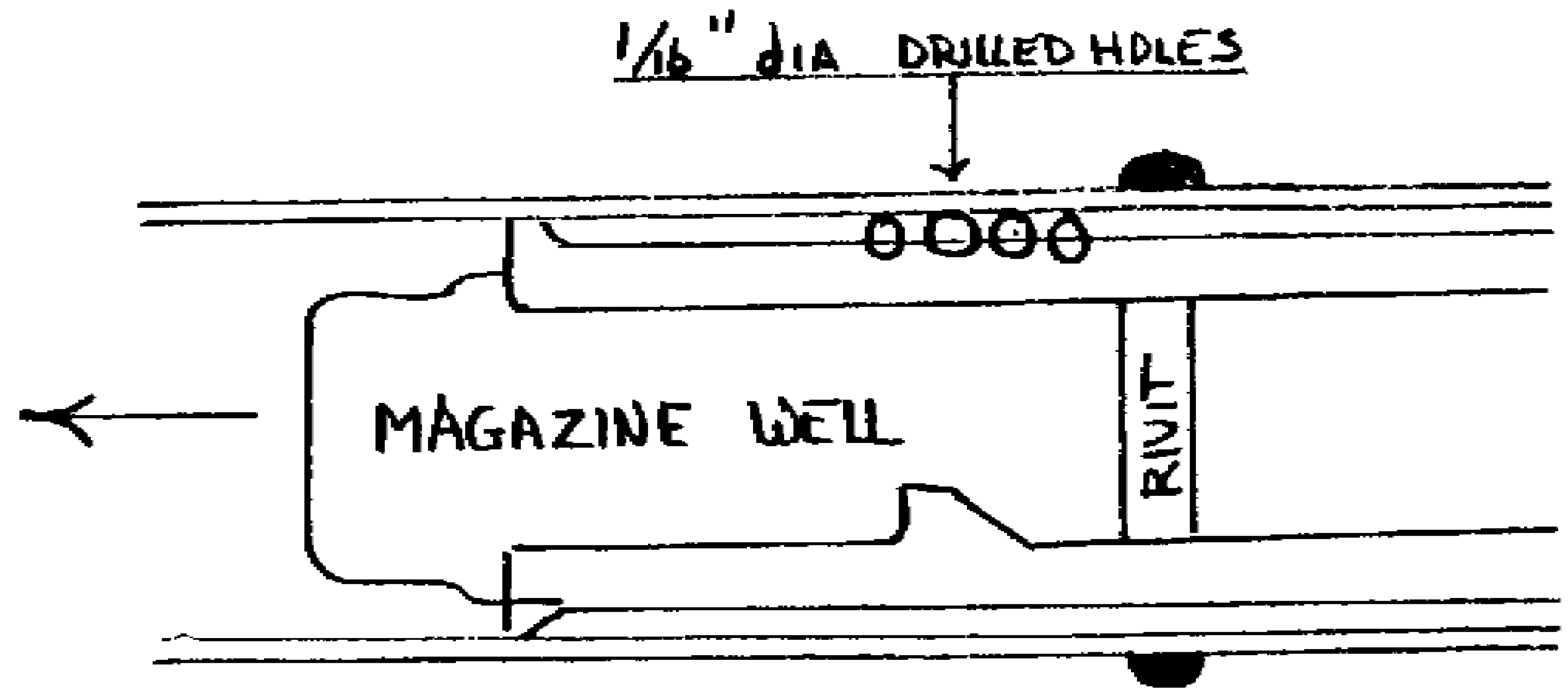


FIGURE NO. 5 Looking down in to a disassembled AK. The muzzle is on the right. Use Fig. #4 to locate where to drill the 1/16"

holes. Use a Swiss file to remove the web between the holes; thus producing a slot in the guide rail.

Depending on the maker of your rifle, there may be a restriction on the right side of the receiver. This is just a folded piece of metal that prevents the selector lever from going to the lowest position. This may be cut off or bent so that the selector lever will pass behind it. See Fig. #6 and #7.

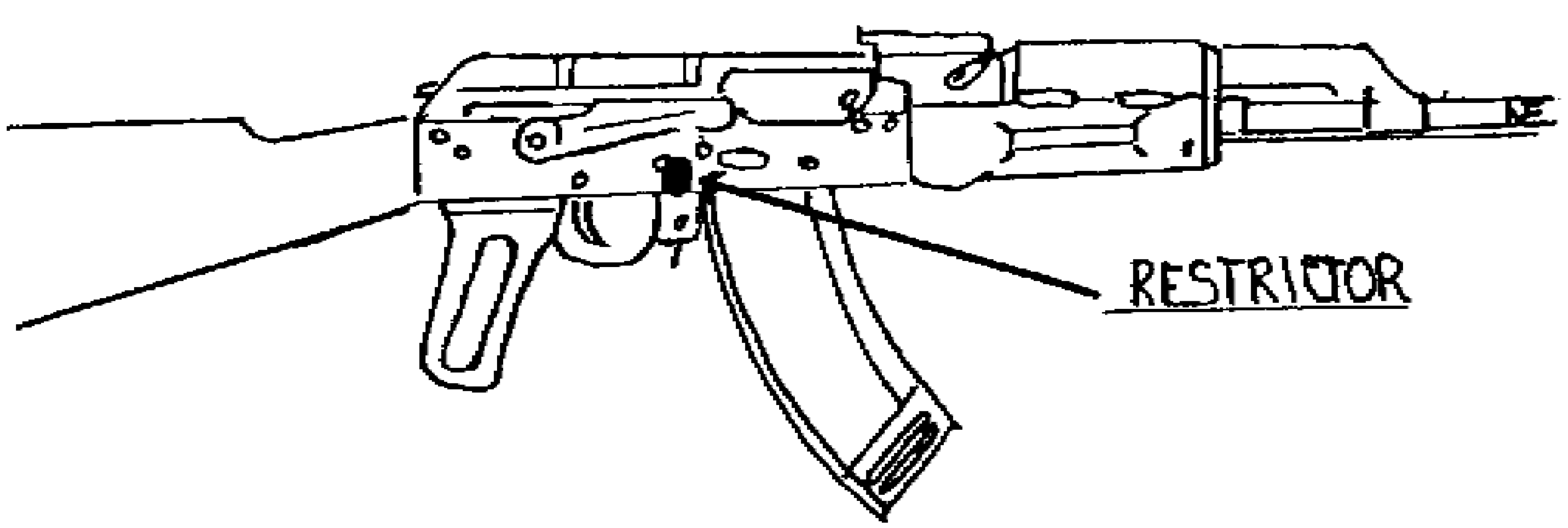


Fig. #6 Dark area is the location of the selector lever restrictor.

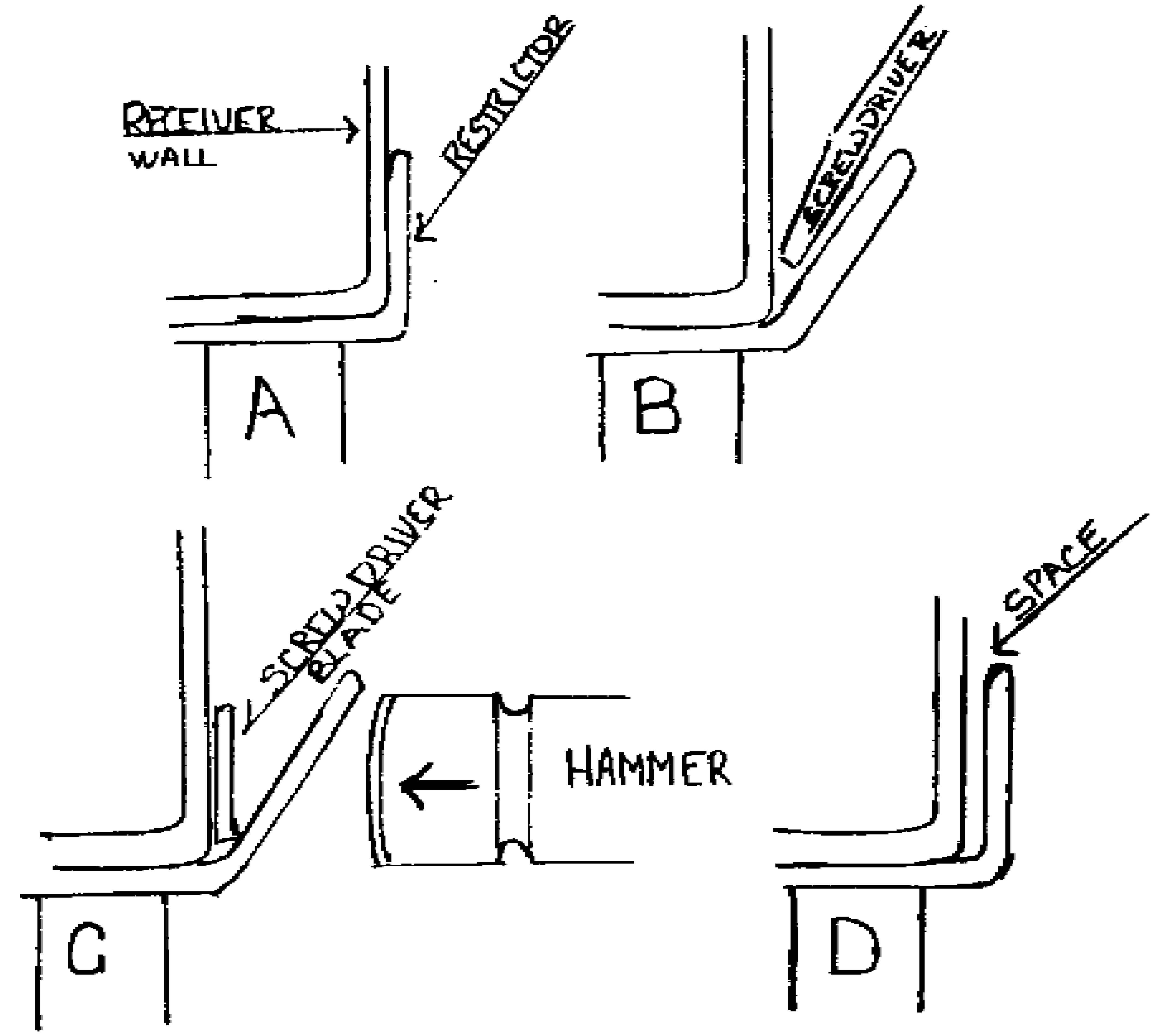


Fig. #7ABCD

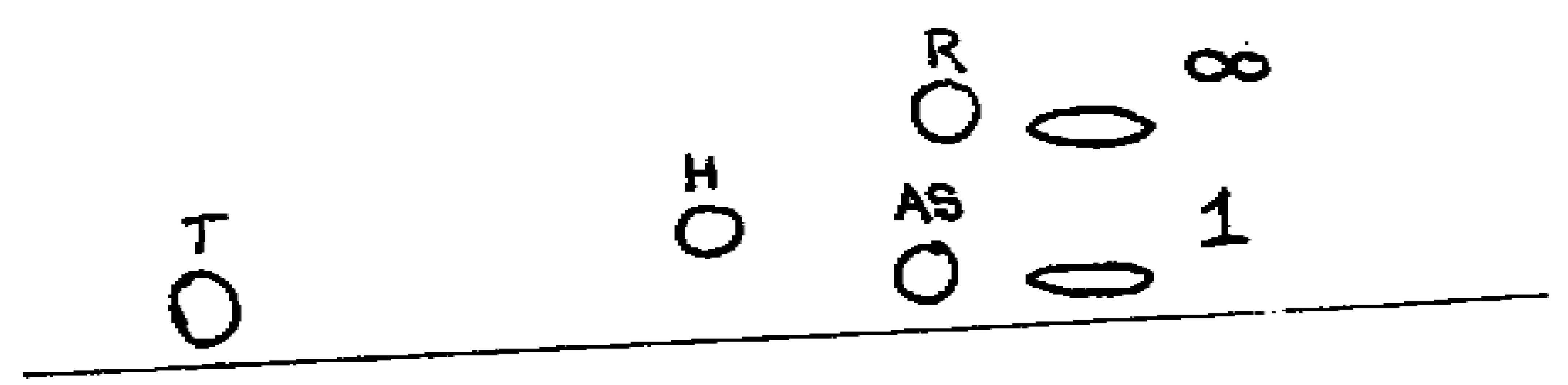


Fig. #7E

Figure #7 shows how to bend the restrictor so that the selector lever will pass behind the restrictor.

Figure #7A shows a side view of how the restrictor lays next to the receiver wall.

Figure #7B shows how to bend the restrictor away from the receiver wall.

Figure #7C shows the placement of a screw driver blade between the receiver wall and the restrictor.

Now, using a hammer, bend the restrictor back in to the receiver wall with the screw driver in place next to the receiver wall. This will result in the selector lever being able to pass behind the restrictor as shown in Fig. #7D.

LOCATION OF SEMI-AUTO DETENT

After you remove or change the restrictor device you may wish to make a detent for the selector lever to move into. This may be made with a light mill cut (DO NOT CUT THROUGH THE RECEIVER WALL). It may be made with a light 1/4 inch drill (DO NOT DRILL THROUGH) or it may be cold punched using an aluminum or wood backing block inside the receiver. The proper location is shown in Fig. #7E. The letters

refer to the same axis pins as on the template.

MANUFACTURE: STEP 3

This step is required of those guns which do not possess a "full auto" bolt carrier. Even though you have a semi-auto rifle it may posses a full auto bolt carrier. The difference is whether the bolt carrier posseses an automatic sear trip cam. This cam is a small projecting surface as illustrated in Fig. #8 A & B.

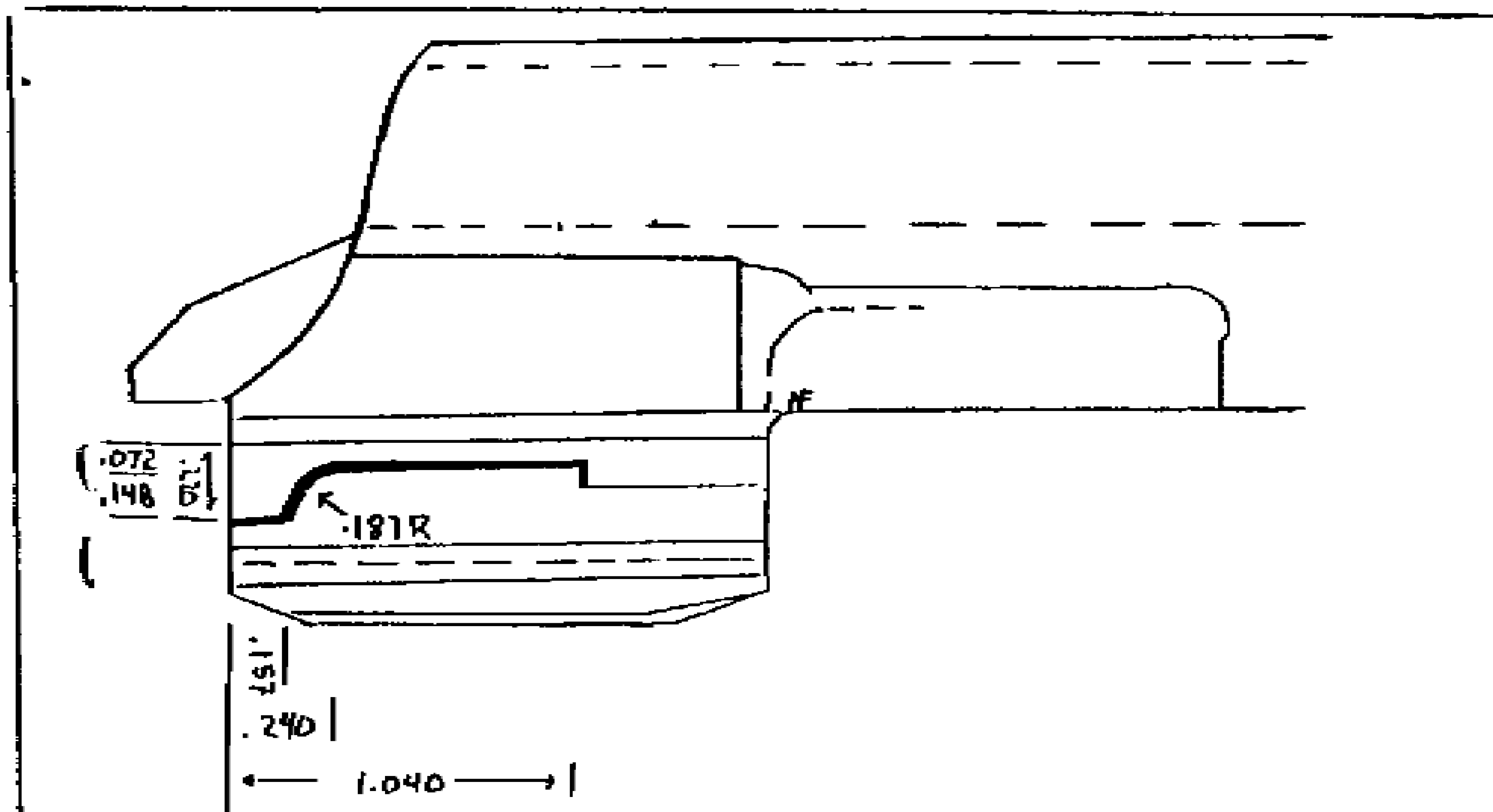


Fig. #8A Right side view of a full auto bolt carrier. The darkened area is the automatic fire cam surface.

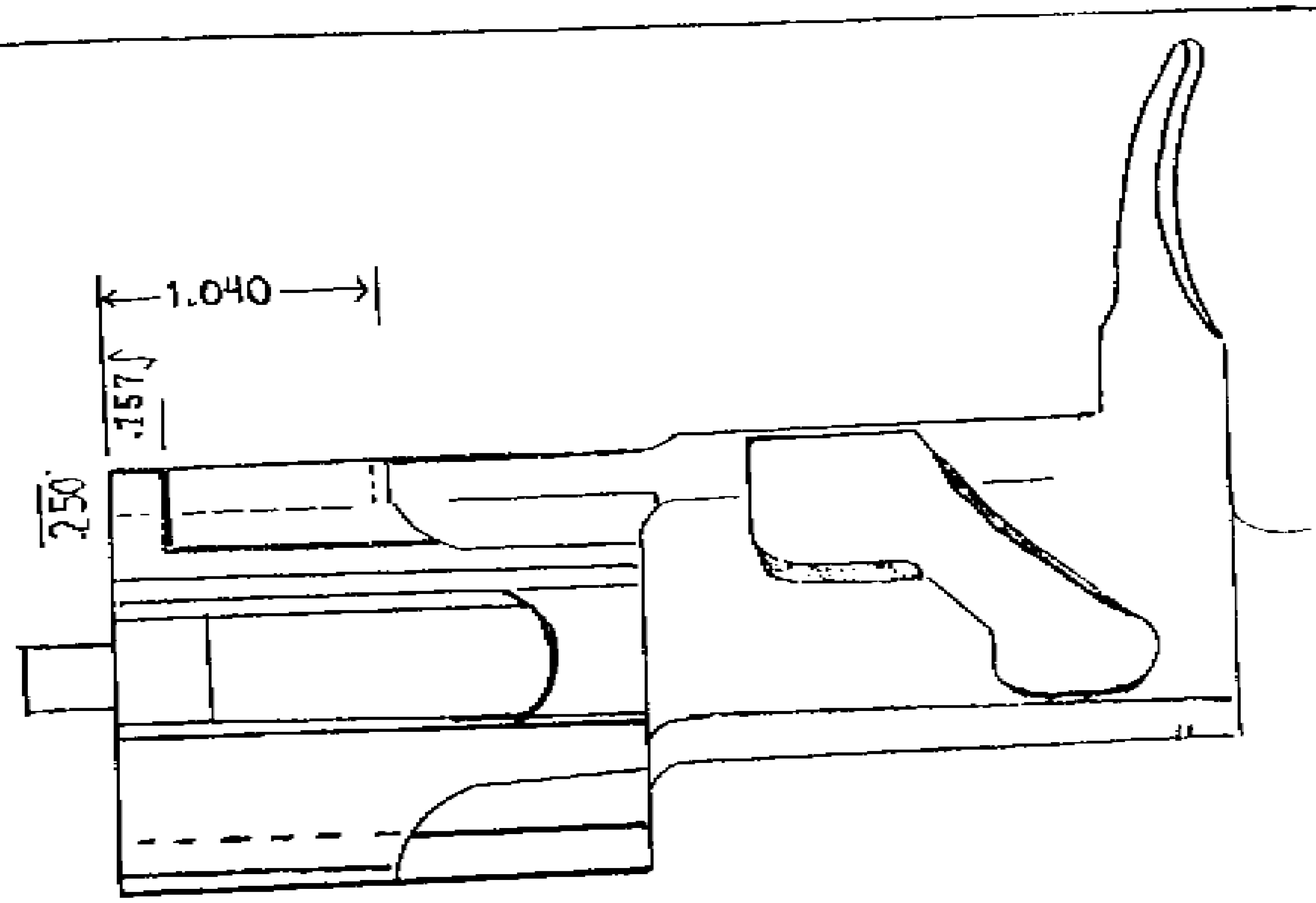


Fig. #8B Bottom view of a full auto bolt carrier. The darkened area with dimensions is the automatic fire cam surface.

A semi-auto bolt carrier by comparison does not have the automatic fire cam surface.

Fig. #8A & #8B gives the dimensions of the cam so that you can have a welder make a build up on your semi-auto bolt and then have a machinist mill it to dimension. Fig. #8A shows the right side of the bolt carrier and Fig. #8B illustrates a bottom view.

If you do not have access to a welder and a machine shop, you may purchase a full auto bolt carrier and simply replace your semi-auto bolt carrier with the full auto carrier.

After reassembly, you now have a select fire rifle. When the selector lever is placed in the upper position, the rifle is on safe, when it is placed in the lower position, it is semi-auto and the middle position is full auto.

If your bolt carrier has not been modified or changed-out, the following information will be of assistance to you:

All Galil 5.56 m/m rifles have a semi auto bolt carrier;

Almost all Valmet rifles have a full auto bolt carrier;

All MAADI rifles have a full auto bolt carrier;

All Hungarian rifles have a full auto bolt carrier;

All Yugoslave rifles have a semi auto bolt carrier;

All Chinese rifles have a semi auto bolt carrier;

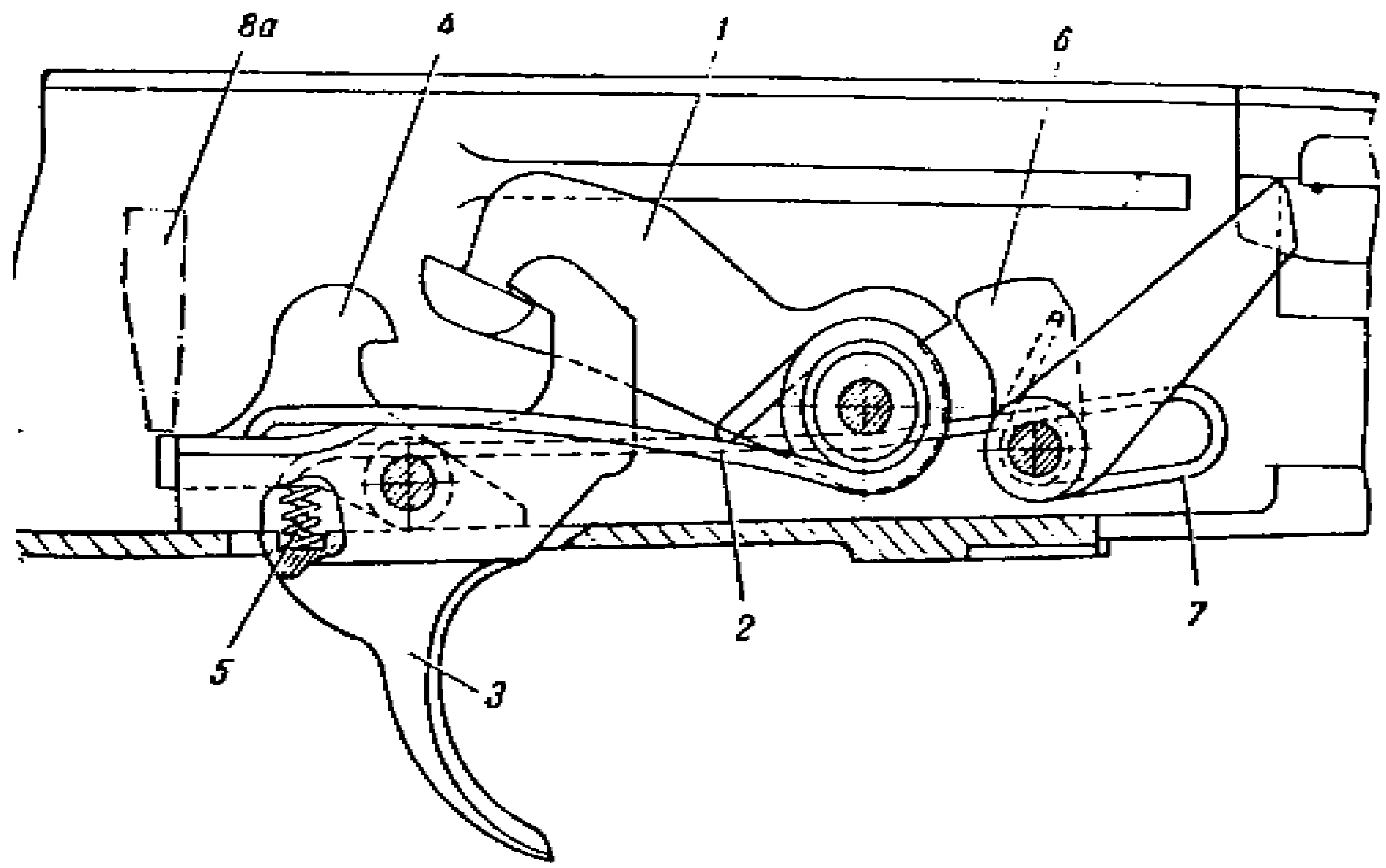
All South African rifles have a full auto bolt carrier; and

All Galil .308 (7.62 x 51 NATO) rifles cannot be converted using the AK-47 full auto replacement parts sets available.

PARTS INTERCHANGEABILITY

In general, all parts of all models interchange. This applies to full auto and semi auto parts. A notable exception exists in the .308 Galil and the .223 Galil. All select fire parts for all AK-47 type of weapons fit the .223 Galil except the gas piston and gas tube and certain parts of stocks and the selector lever. In the case of the .308 Galil the above parts and the automatic sear do not work. AK-47 type of bolt carriers work in Galil rifles if the piston is removed and replaced with a Galil piston.

certain AKM rifles have a complex trigger-hammer mechanism commonly referred to as a "rate retarder" trigger. This is actually an anti-bounce device for the light AKM receiver guns. If you have one of these devices you must have a trigger assembly, disconnect and hammer for it to function with the rest of the full auto parts; if you have all of these parts they will work in the full auto conversion described. It should be noted that these are seldom seen in the United States.



ig. #8C AK47 Trigger Mechanism. 1, hammer;

2, hammer and trigger spring; 3, trigger; 4, disconnector; 5, disconnector spring; 6, full-auto sear; 7, full-auto sear spring; 8, selector; 8a, selector-lever bar. **Note that** #7 goes under the hammer axis pin and over the trigger axis pin.

RE-ASSEMBLY

At the completion of your conversion to select fire it will be necessary to re-assemble your rifle to shooting condition using your full-auto parts. You must not re-use the semi-auto disconnector or hammer. Also, you must remove the spring that holds in the axis pins as it will no longer be used.

First install the automatic sear and sear spring in the receiver by inserting the axis pin through these parts. Refer to figure #8C for their proper positioning.

Next, using a "AK-47 slave pin" assemble the trigger, disconnector and disconnector spring. Drop this assembly into the receiver and raise the automatic sear spring above the trigger axis pin hole and insert the trigger

axis pin (this ejects the AK-47 slave pin).

Finally, assemble the full auto hammer and hammer spring and insert them into the receiver. Use a screw driver to depress the automatic sear spring below the hammer axis pin hole. Now insert the hammer axis pin. Hook the tail end loops of the hammer spring over each side of the trigger. This completes the assembly of the lower receiver. The automatic sear spring retains all of the axis pins in the receiver.

ACCESSORIES

<u>Front Sight Tool</u>: These are of several ypes; the simplest adjusts elevation only and he second type zeros the windage and eleva-ion. See Fig #9. Due to the wide variety of mmunition available this is a <u>must</u> so you can ero your rifle when you change ammunition as ach new type will have a different point of mpact.

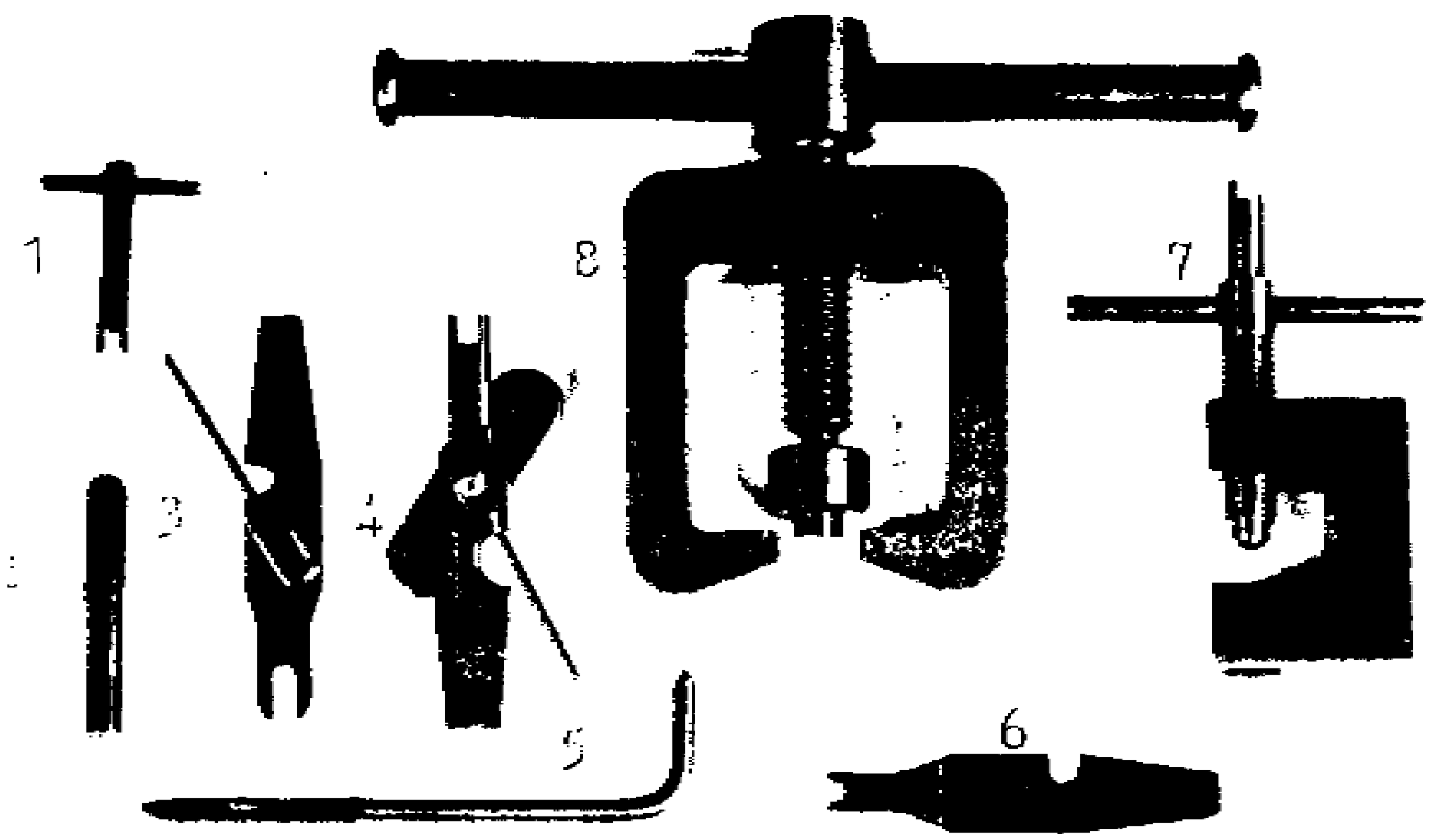


Fig. #9 Tools for the AK: 1, sight elevation tool; 2, same; 3, sight tool, screw driver and pin punch; 4, same; for a Galil; 5, gas port reamer; 6, same as (3); 7, sight tool for windage and elevation; and 8, Chinese sight windage tool.

Slave Pin: See Fig. #12. This part is absolutely necessary in the work described. It allows the assembly of the trigger, trigger disconnect spring and the disconnector to be assembled outside of the gun and dropped into the receiver for assembly as a unit. Without it you will have a difficult time assembling the gun and may lose critical parts. It may be stapled to the inside front cover of this book. See back of book for sources if it is

not included with this book.

Scope Mounts: These range from idiotic to excellent design. The AK is in general a very accurate rifle. The sights are so close together and coarse that it is difficult to secure the accuracy that the rifle is capable of delivering. In my opinion the mount illustrated in Fig. #10 is the only type that will parallel the accuracy of the rifle. This replaces the top cover and has a tensioning device built into it to remove any "play" between the receiver and the scope mount.



Fig. #10 A top cover scope mount for Valmets, AK's and Galils. It allows the use of the iron sights and the scope without removal.

Muzzle Attachments: The first AK-47's had thread protectors to protect the threads on an AK's barrel. This is a threaded nut only and is known as a Chinese type 56 thread protector. This was followed by the AKM type thread protector and compensator with its characteristic angled body. there are AR-15/M-16 type flash hiders and the Hungarian flash hider which is the most dramatic in appearance. These are all illustrated in Fig. #11. The barrel threads are for attaching flash hiders (above), blank fire attachments, grenade launchers and sound suppressors.

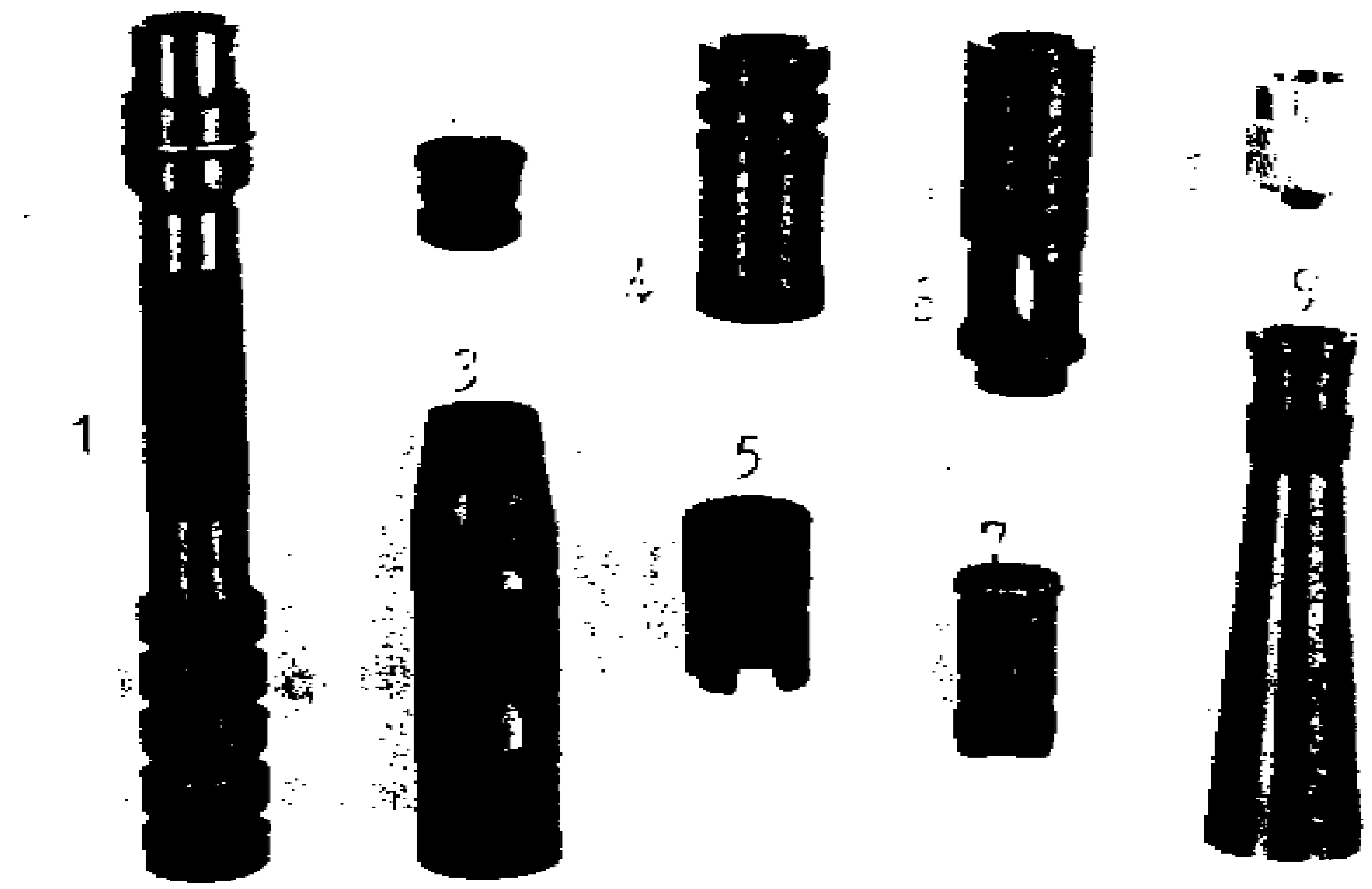


Fig. #11 MUZZLE ATTACHMENTS. 1, Grenade launcher; 2, muzzle nut/thread protector; 3, Hungarian AMD flash hider/muzzle brake; 4, M-16A2 type flash hider/grenade launcher; 5, A.U.G. type flash hider/grenade launcher/compensator; 6, AK-74 type compensator/muzzle brake; 7, AKM compensator; 8, blank fire attachment (BFA); and 9, Chinese funnel type flash hider.

Sources of Supply

Below are listed several suppliers of parts and accessories for your Valmet, Galil, or AK-47 rifle. Preceeding this list are catagories of goods offered and a number to identify each catagory. As an example, if you need a scope mount this is catagory 5. Search down the list of suppliers until you find one with a 5 after it and they should be able to satisfy your needs. This list is current at the date of publication.

1 Full auto parts
2 Repair or replacement parts
3 Accessories
4 Tools
5 Scopes and mounts
6 Original parts and accessories which are imported
7 Templates
8 Books and literature
9 Custom work

LIST

A.S.C. Ltd.
Box 409
Mountain Home, AR 72653
(501)425-2541 1,2,3,4,5,6,8

TRADEWINDS

312 Kim Drive
Fairview Heights, Il 62208
(618) 806-4740 2,3,4,5

CATCO
316 California Blvd.
Suite 341
Reno, NV 89509
(707)253-8338 7

Dean's Gun Shop
2005 S. 20th St.
St. Joseph, MO 64507 3,4,5

James K. Kimbel
Rt. 2, Box 48
Green Ridge, MO 65332
(816)527-3706 1,3,5,9

M & M Template Sales
Box 412
Searcy, AR 72143 2,3,4,5,7

SPENCO
3713 Corbett
Del City, OK 73115
(405)670-6842 3,4,8

Sherluk Mkt. & Trading
P. O. Box 6991
Toledo, OH 43612
(419)478-5486 1,2,3,4,5,8

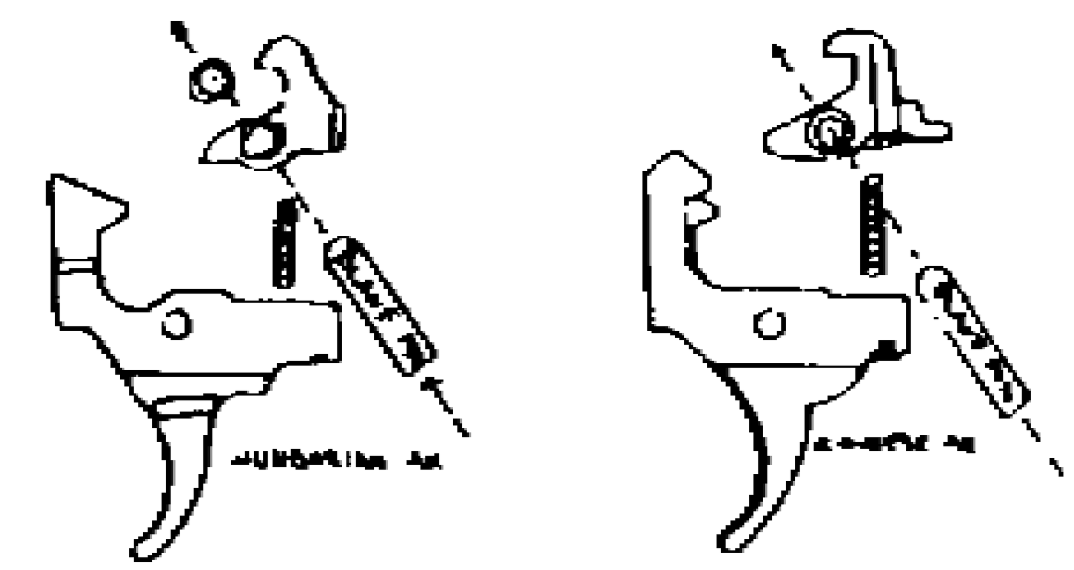
Cleaning Kit and Disassembly Tool

All AK-47 rifles originally came equiped with a cleaning kit and combination tool. On solid stock rifles this was placed in the stock cavity. The cleaning kit was carried by the individual soldier on the folding stock varieties. This kit contained a patch jag and a brush. These cleaning aids are attached to the cleaning rod which is located beneath the barrel. The cap to this kit is the muzzle protector for the rod to pass through. The body becomes the handle for the cleaning rod. This case is also a combination tool to aid in the disassembly of the rifle. The uses of this tool are illustrated on the last pages of this manual. Some of these kits contained sight tools, slave pins, and pin punches while others had only the jag and brush. The Chisese issued one sight tool for approximately each 40 rifles.

AUTOMATIC SALES CO. LTD.

AK-47 & AKM SLAVE PIN

Used As A Positioning Pin In The Assembly Of All AK-Type Trigger-Disconnector Assemblies Outside Of The Rifle.
For Use In AK-47, AKM, AKS, Hungarian, Galil, LM 4-5, Yugoslav, & Valmet Rifles.



INSTRUCTIONS:

1. After disassembly of your rifle & before reassembly:

2. Hold trigger in firing position & install disconnector & disconnector spring and hold these in position between the trigger and your thumb.

3. Slide slave pin through this assembly with the tapered end projecting on the right.

4. Install entire trigger/disconnector assembly in the rifle

5. Push in the trigger axis pin from the left and thus ejecting the slave pin on the right

6. Save the slave pin for future use

Fig. 12 Slave pin instructions. this tool is a "must" in assembley of your rifle.